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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/670,760	09/27/2000	Luis Felipe Cabrera	MSFT-0176/150795.1	6145

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EXAMINER

THAI, HANH B

ART UNIT	PAPER NUMBER
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2171

DATE MAILED: 02/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/670,760

Applicant(s)

CABRERA, LUIS FELIPE

Examiner

Hanh B Thai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on Reconsideration dated 1/5/2004.

2a) ☒ This action is **FINAL**.

2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-34 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-34 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some * c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____

4) ☐ Interview Summary (PTO-413) Paper No(s). _____

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____

DETAILED ACTION***Response to Arguments***

Applicant's arguments filed January 5, 2004 have been fully considered but they are not persuasive.

Applicant states on pages 4-5, "Pongracz et al. cannot be said to teach or suggest a method for generating backup files in a computer system and includes generating a full backup file for a ser of objects, then generating incremental files(s) for the set of objects wherein each of the incremental files(s) is associated with the set of objects,

...(claim1)...(claim 15)...(claim 22)...(claim 32)". Examiner respectively disagrees.

Pongracz teaches in col. 1, line 44-61; col.5, line 3-21, line 60-66; col.6, line 1-27; Fig. 3 and corresponding text, the following:

"There are several types of backup files employed to duplicate files used by a transactional system such as a database system. **"Full backup" files are used to copy an entire file on to a tape.** If the copy is made to a disk drive, the file is called a "datafile copy". **"Incremental backup" files store data that has changed since a last backup file was made.** Two types of incremental backups may be employed. A **"standard incremental backup" backs up data from the most recent full backup, datafile copy or the most recent incremental backup.** A **"cumulative incremental backup" stores data that has changed since the last full backup or datafile copy.** For example, if a full backup is made on Sunday, an incremental backup is made on Monday, a standard incremental backup made on Tuesday will contain the changes made since the incremental backup on Monday; however **a cumulative incremental backup made on Tuesday will contain all changes made since the full backup on Sunday...**"

Examiner maintains that above teaching by Pongracz clearly reads on the claim limitation of generating a full backup file for a set of objects. The entire file in Pongracz is list of files (see Fig.3) that corresponds to a ser of objects, then generating incremental file(s) for the set of objects, and identifying a target object within the set of objects for the

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generation of cumulative backup file(s). And Stevens was used as a secondary teaching for the curing of backup file(s) off-line. Therefore, Pongracz and Stevens, in combination, teach all of the claimed limitations. Because it is obvious to apply the combination system of Pongracz and Stevens to create a specialized system that creates backup, incremental and cumulative information associated with an entire collection of files.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-13, 15-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pongracz et al. (U. S. Patent no. 6,073,128) in view of Stevens (U. S. Patent no. 6,145,088).

Regarding claims 1 and 15, Pongracz discloses a method for generating backup files in a computer system, comprising:

- generating a full backup file corresponding to a first time for a set of objects in the computer system (see col. 1, lines 45-49; col.5, lines 3-21; Fig.3 and corresponding text, Pongracz). Fig 3 of Pongracz showing the full backups and incremental backups of the file list and this file corresponds to the set of objects;

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- generating at least one incremental file for the set of objects after the first time (see col.6, lines 18-21 and col. 3, lines 64-67, Pongracz) wherein each of the at least one incremental file is associated with the set of objects;

- identifying a target object within the set of objects for the generation of cumulative

backup files (see col. 5, lines 60-66 and col. 3, lines 53-64); and

- generating at least one cumulative backup file corresponding to a second time, after

the first time, for the target object (see column 1, lines 53-61, Pongracz).

Pongracz, however, does not disclose that the backup file is performed off-line. Stevens, on the other hand, discloses this limitation on (column 1, lines 49-56, Stevens). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Pongracz. The motivation of doing so would have been to provide relief to data loss (column 1, lines 49-56, Stevens).

Regarding claim 2, Pongracz/Stevens combination further discloses that the generating of the at least one cumulative backup file includes analyzing at least one incremental file generated between the first and second time (see column 2, lines 10-21, Pongracz).

Regarding claim 3 Pongracz/Stevens combination further discloses that the analyzing of at least one incremental file is performed in reverse chronological order, starting from the second time (see column 49-53, Pongracz).

Regarding claim 4, Pongracz/Stevens combination further discloses restoring the target object to the second time by processing the full backup file and the at least one cumulative backup file (see column 3, lines 64-67, Pongracz).

Regarding claim 5, Pongracz/Stevens combination further discloses that restoring the target object to a third time later than the second time by processing a full backup file, the at least one cumulative backup file and any incremental backup files generated between the second time and the third time (see column 1, lines 46-61, Pongracz).

Regarding claims 6-7, Pongracz/Stevens combination further discloses that the identifying includes identifying a related subset of files as the target object for a cumulative backup file (see column 3, lines 49-58, Pongracz).

Regarding claim 8, Pongracz/Stevens combination further discloses the identifying includes identifying a directory as the target object for a cumulative backup file (see column 3, lines 53-58, Pongracz).

Regarding claim 9, Pongracz/Stevens combination further discloses that a user identifies the target object (see column 3, lines 18-19 and column 5, lines 3-21, Pongracz).

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Regarding claim 10, Pongracz/Stevens combination further discloses the monitoring and analyzing restore operations in the computer system (see column 3, lines 45-53, Pongracz).

Regarding claim 11, Pongracz/Stevens combination further discloses the identifying of the target object is designed to meet a condition of bounded restore time for the target object (see column 7, line 60 to column 8, line 8, Pongracz).

Regarding claim 12, Pongracz/Stevens combination further discloses controlling the frequency of generating at least one of a full, incremental and cumulative backup (see column 1, line 65 to column 2, line 9, Pongracz).

Regarding claim 13, Pongracz/Stevens combination further discloses a computer-readable medium having computer-executable instructions (Fig. 1 of Pongracz).

Regarding claims 16-21, the elements of these claims have been rejected in the analysis above and these claims are rejected on that basis.

Regarding claims 22, 32 and 34, Pongracz discloses a computer system (Fig. 1) that the storage of backup information for a plurality of target objects in the form of full, incremental and cumulative backup information (see col. 1, lines 45-49; col.5, lines 3-21; Fig.3 and corresponding text, Pongracz). Fig 3 of Pongracz showing the full backups and incremental backups of the file list and this file corresponds to the target objects; wherein

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the incremental and cumulative backup information is associated with the collection of the plurality of target objects; wherein the full backup information is generated at a first time and the cumulative backup information is generated at a second time (column 1, lines 45-56, Pongracz).

Pongracz, however, does not disclose that plurality of servers connected to network and a plurality of storage components for the storage of backup information wherein the backup can be performed off-line. Stevens, on the other hand, discloses this limitation on (Fig. 2 and column 1, lines 49-56, Stevens). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Pongracz. The motivation of doing so would have been to provide relief to data loss (column 1, lines 49-56, Stevens).

Regarding claims 23 and 24, the limitations of these claims have been noted in the rejection of claim 22. Pongracz, however, does not reconstructing of the target object. But it is inherent to use the system Pongracz to reconstruct the object to the second time includes processing at least one cumulative backup file associated with the second time and a full backup file associated with the first time. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Pongracz. The motivation of doing so would have been to provide an efficient backup system.

Regarding claims 25-31 and 33, the elements of these claims have been rejected in the analysis above and these claims are rejected on that basis.

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2. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pongracz et al. (U. S. Patent no. 6,073,128) in view of Stevens (U. S. Patent no. 6,145,088) and further view of Fletcher et al. (U. S. Patent no. 6,038,379).

Regarding claim 14, the limitations of this claim have been noted in the rejection of claim 1. In addition, Pongracz/Stevens combination does not disclose “the storage block mappings for the target object” and “the change is stored in the format of MTF”.

Fletcher, however, discloses this limitation on (column 6, lines 10-19 and column 8, lines 18-36, Fletcher). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teaching of Pongracz and Stevens. The motivation of doing so would have been to support the full backup and recovery.

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Zaremba (U.S. Patent no. 6,647,399) discloses a method, system, program, and data structures for naming full backup versions of files and related deltas of the full backup versions.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh B Thai whose telephone number is 703-305-4883. The examiner can normally be reached on 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 703-308-1436. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Hanh Thai HT
Art Unit 2171
January 29, 2004


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